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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,833	01/15/2004	Tatsuro Uchida	1232-5254	8301
27123	7590	08/08/2005	EXAMINER	
MORGAN & FINNEGAN, L.L.P.			BLEVINS, JERRY M	
3 WORLD FINANCIAL CENTER			ART UNIT	
NEW YORK, NY 10281-2101			PAPER NUMBER	
			2883	

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/759,833	UCHIDA, TATSURO	
	Examiner	Art Unit	
	Jerry Martin Blevins	2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 January 2004.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>09/13/2004</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent to Ouchi, number 6,829,398.

Regarding claim 1, Ouchi teaches an optical connector device (Figure 2B) comprising a two-dimensional waveguide layer (7), a semiconductor laser (5,6) having a function capable of switching a plurality of different oscillation modes, and an optical path converting structure (3,10) for converting an optical path of an outgoing light from the semiconductor laser, wherein the optical path converting structure is disposed within the two-dimensional optical waveguide layer (Figure 2B) such that a radiation angle of the semiconductor laser changes within the two-dimensional optical waveguide layer upon switching over the oscillation mode of the semiconductor laser (column 2, lines 24-30) and the outgoing light from the semiconductor laser propagates in the two-dimensional optical waveguide layer.

Regarding claim 5, Ouchi teaches an optical and electrical circuit combined board (Figure 4) comprising the optical connector device according to claim 1 formed so

Art Unit: 2883

as to obtain electrical connection with an electrical circuit board (column 8, lines 23-25), wherein a part of or whole signals from the electrical circuit board are transmitted by the optical circuit as transmission of optical signals using the optical connector device (column 12, lines 13-32).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouchi in view of US Patent to Suyama et al., number 6,055,255.

Regarding claim 2, Ouchi teaches the limitations of the base claim 1. Ouchi also teaches that the semiconductor laser is a vertical cavity surface-emitting laser (column 2, lines 19-24). Ouchi does not teach that the semiconductor laser is formed with a current constricting layer in a vicinity of an active layer composing the semiconductor laser. Suyama teaches a semiconductor laser (Figure 1, element 100) formed with a current constricting layer (10) in a vicinity of an active layer (4) composing the semiconductor laser. It would have been obvious to one of ordinary skill in the art at the time of the invention to form the semiconductor laser of Ouchi with a current constricting layer in a vicinity of an active layer composing the semiconductor laser, as taught by Suyama. The motivations would have been to reduce noise, decrease light leakage,

prevent deterioration of optical characteristics and improve the reliability of the semiconductor laser (Suyama, column 4, line 58 – column 5, line2).

Regarding claims 3 and 4, Ouchi in view of Suyama teaches the limitations of the base claim 2. Ouchi does not teach that the oscillation mode of the laser is switched by control of at least one of a shape of an aperture of the current constricting layer and an injection current amount of the laser. Furthermore, Ouchi does not teach that the control causes a change in a radiation angle of a far-field image of the semiconductor laser. Suyama teaches that the oscillation mode of the laser is switched by control of an injection current amount of the laser (column 8, lines 11-24). Furthermore, Suyama teaches that the control causes a change in a radiation angle of a far-field image of the semiconductor laser (Figure 8 and column 10, lines 18-29). It would have been obvious to one of ordinary skill in the art at the time of the invention to control the switching of the oscillation mode of the laser of Ouchi by controlling an injection current amount of the laser, wherein the control causes a change in a radiation angle of a far-field image of the semiconductor laser, as taught by Suyama. The motivation would have been to sustain the laser oscillation (Suyama, column 2, lines 13-34).

### ***Conclusion***

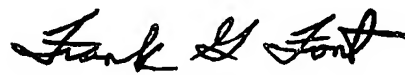
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Martin Blevins whose telephone number is 571-272-8581. The examiner can normally be reached on Monday through Friday.

Art Unit: 2883

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMB

  
Frank G. Font  
Supervisory Patent Examiner  
Technology Center 2800